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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,189

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Ermanno Filippi

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07/09/2009

AKERMAN SENTERFITT

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EXAMINER

MARTINEZ, BRITTANY M

ART UNIT

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1793

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,189	Applicant(s) FILIPPI ET AL.	
	Examiner BRITTANY M. MARTINEZ	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Application

Claims 1-7 are pending in the instant application, with **Claims 1-7** amended and examined.

Priority

1. The instant application is a national stage entry of PCT/EP03/09931, filed September 8, 2003, which claims priority to European Patent Application No. 02023316.9, filed October 17, 2002.

Claim Rejections - 35 USC § 102/103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. **Claims 3-6** are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Filippi et al. (EP 1236505 A1).

1. Although **Claim 3** references **Claim 1**, **Claim 3** does not necessitate **Claim 1** since process limitations do not hold any patentable weight in apparatus claims.

2. With regard to **Claim 3**, Filippi discloses an apparatus for carrying out a highly exothermic oxidative reaction in pseudo-isothermal conditions, comprising a plurality of heat exchangers, wherein with each of said exchangers is associated at least one distribution-supplier suitable for being fed continuously by a flow of reactants at a predetermined temperature and flow rate (Filippi, "Abstract;" Claims 1-6; Figures 1-5).

3. With regard to **Claim 4**, Filippi discloses at least one distribution-supplier being supported by said respective heat exchanger (Filippi, "Abstract;" Claims 1-6; Figures 1-5).

4. With regard to **Claim 5**, Filippi discloses said heat exchanger being plate-shaped and substantially rectangular, inside which a first chamber, intended to be crossed by a respective flow of reactants to be preheated, and a second chamber, separated fluid-tight from said first chamber and in fluid communication with said at least one distribution-supplier are defined (Filippi, "Abstract;" c. 1, 0003; Claims 1-6; Figures 1-5).

5. With regard to **Claim 6**, Filippi discloses said distribution-supplier comprising a carter fixed to a wall of a respective plate-shaped heat exchanger, with which it substantially defines a duct in fluid communication, on one side, with said second chamber of the exchanger and, on the other side, with the outside of the exchanger itself, through a plurality of holes formed in said carter (Filippi, "Abstract;" Claims 1-6; Figures 1-5).

6. **Claims 3-6** are also obvious over Filippi because anticipation is the epitome of obviousness.

Claim Rejections - 35 USC § 103

7. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Filippi et al. (EP 1236505 A1) as applied to **Claim 3** above, and further in view of Zardi (US 4,769,220).

8. With regard to **Claim 7**, Filippi discloses carrying out highly exothermic catalyzed oxidative reactions in pseudo-isothermal conditions, comprising utilizing heat exchangers immersed in a catalytic bed (Filippi, "Abstract;" c. 1, 0002; Claims 1-6; Figures 1-5).

9. The aforementioned applied art does not explicitly disclose a pseudo-isothermal chemical reactor for carrying out highly exothermic catalyzed oxidative reactions, comprising a shell in which is defined a reaction zone at least partially occupied by a catalytic bed (**Claim 7**).

10. With regard to **Claim 7**, Zardi discloses a pseudo-isothermal chemical reactor for carrying out highly exothermic catalyzed oxidative reactions, comprising a shell in which is defined a reaction zone at least partially occupied by a catalytic bed, wherein heat exchangers are immersed in said catalytic bed (Zardi, "Abstract;" Figure; c. 1, l. 10-13 and 60-68; c. 2, l. 1-2; Claim 1).

11. Thus, it would have been obvious to one of ordinary skill in the art to utilize the apparatus of the aforementioned applied art in the reactor of Zardi because one of ordinary skill in the art could have pursued the known potential options for utilizing an apparatus for carrying out a highly exothermic oxidative reaction in pseudo-isothermal conditions within his or her technical grasp with a reasonable expectation of success.

Double Patenting

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. **Claims 3-7** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-3 of copending Application No. 11/572403. Although the conflicting claims are not identical, they are not patentably distinct from each other because Application No. 11/572403 discloses a pseudo-isothermal chemical reactor for carrying out highly exothermic catalyzed oxidative reactions, comprising a shell in which is defined a reaction zone at least partially occupied by a catalytic bed, wherein heat exchangers according to **Claim 3** are immersed in said catalytic bed, substantially as in the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. **Claims 1-7** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-10 of U.S. Patent No. 7,186,389 B2 in view of Filippi et al. (EP 1236505 A1). U.S. Patent No. 7,186,389 B2 discloses a method for carrying out highly exothermic oxidative reactions in pseudo-isothermal conditions, an apparatus for doing such, and a reactor for doing such substantially as in the instant application. However, U.S. Patent No. 7,186,389 B2 does not explicitly disclose a plate-shaped heat exchanger. Filippi discloses said heat exchanger being plate-shaped and substantially rectangular, inside which a first chamber, intended to be crossed by a respective flow of reactants to be preheated, and a second chamber, separated fluid-tight from said first chamber and in fluid communication with said at least one distribution-supplier are defined (Filippi, "Abstract;" c. 1, 0003; Claims 1-6; Figures 1-5). Thus, it would have been obvious to one of ordinary skill in the art to modify the invention of U.S. Patent No. 7,186,389 B2 with the plate-shaped heat exchangers of Filippi since the equivalence of the heat exchangers of U.S. Patent No. 7,186,389 B2 and Filippi for their use in the instant invention would have been obvious to one of ordinary skill in the art and one of ordinary skill in the art could have pursued the known potential options for heat exchange within his or her technical grasp with a reasonable expectation of success.

7. **Claims 1-6** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-6 of U.S. Patent No. 7,087,205 B2.

Although the conflicting claims are not identical, they are not patentably distinct from each other because U.S. Patent No. 7,087,205 B2 discloses a method for carrying out highly exothermic oxidative reactions in pseudo-isothermal conditions and an apparatus for doing such, substantially as in the instant application.

Response to Amendment

Applicants' amendments filed April 3, 2009, with respect to the Specification and Claims have been fully considered and are accepted. The objections to the Specification and Claims and the 35 U.S.C. Claim rejections filed October 3, 2008, have been withdrawn.

Response to Arguments

8. Applicants' arguments filed April 3, 2009, with respect to the rejection of **Claims 1 and 2** over Badische and Filippi have been fully considered and are persuasive. The rejection of **Claim 1** over Badische and the rejection of **Claim 2** over Badische in view of Filippi have been withdrawn.

9. Applicants' arguments with respect to **Claims 3-6** have been considered but are moot in view of the new ground(s) of rejection.

10. Applicants' arguments filed April 3, 2009, regarding the Double Patenting rejections have been fully considered but they are not persuasive. Although **Claim 3** references **Claim 1**, **Claim 3** does not necessitate **Claim 1** since process limitations do not hold any patentable weight in apparatus claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRITTANY M. MARTINEZ whose telephone number is (571) 270-3586. The examiner can normally be reached Monday-Friday 9:00AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached at (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wayne Langel/
Primary Examiner, Art Unit 1793

BMM

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/Brittany M Martinez/